

CLAIMS

I claim:

1. A publishing-playback system includes an authoring-publishing means for authoring and transmitting a protected media data to a user-application means for media-data playback with said protected media data protected by several intellectual property protection and management (IPMP) systems wherein:
 - 10 said authoring-publishing means includes a parametric representation means for generating a parametric definition of IPMP tasks for attaching to said protected media data for said user-application means to receive said protected media and to response in real time to said parametric definition in applying one of said several IPMP systems.
 2. The publishing-playback system of claim 1 wherein:
 - 20 said parametric definition of IPMP tasks further comprising a tool list for including a list of tools executable by said user application means.
 3. The publishing-playback system of claim 2 wherein:
 - 25 said user-application means further includes a parametric tool means to perform a description matching for selecting a tool from said tool list in response to an IPMP task included in said parametric definition.
 - 30 4. The publishing-playback system of claim 1 wherein:
 - 35 said parametric representation means further includes a grammar means for arranging said parametric definition according to a grammar of a structured language.

5. The publishing-playback system of claim 1 wherein:
said parametric definition of IPMP tasks further comprising
a tool-code for enabling said user-application means to
acquire a tool from an external resource to process said
protected media data.
6. The publishing-playback system of claim 1 wherein:
10 said parametric definition of IPMP tasks further comprising
an indication of representing a complete or a partial part of
an IPMP system.
7. The publishing-playback system of claim 1 wherein:
15 said parametric definition of IPMP tasks further comprising
at least a portion provided in a text compression form.
8. The publishing-playback system of claim 1 wherein:
20 said parametric definition of IPMP tasks further comprising
at least a portion provided in a machine language.
9. The publishing-playback system of claim 1 wherein:
25 said parametric definition of IPMP tasks further comprising
at least a portion provided as an executable code by said
user-application means.
- 30 10. The publishing-playback system of claim 1 wherein:
said parametric definition of IPMP tasks further comprising
at least a pre-condition required for said user-application
means to authorize said user-application means to process
35 said protected media data.

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11. The publishing-playback system of claim 1 wherein:
said parametric definition of IPMP tasks further comprising
at least a behavior-limit for said user-application means to
use said protected media data under an absence of
permission condition of said user-application means.

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12. The publishing-playback system of claim 1 wherein:
said parametric definition of IPMP tasks further comprising
at least a consumption-limit for defining a limited
consumption of said protected media data by said user-
application means under an absence of permission condition
of said user-application means.

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13. The publishing-playback system of claim 1 wherein:
said parametric definition of IPMP tasks further comprising
at least a detail task definition for defining an IPMP task.

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14. The publishing-playback system of claim 1 wherein:
said parametric definition of IPMP tasks further comprising
at least a detail algorithm definition for defining an
algorithm required by an IPMP task.
15. The publishing-playback system of claim 1 wherein:
said parametric definition of IPMP tasks further comprising
at least a combined task definition for defining a combined
IPMP task by combining two IPMP tasks.

- 5 16. The publishing-playback system of claim 1 wherein:
 said parametric definition of IPMP tasks further comprising
 a task implementation identifier for including an executable
 code in said parametric definition.
- 10 17. The publishing-playback system of claim 1 wherein:
 said parametric definition of IPMP tasks further comprising
 a task configuration definition for representing a
 configuration of an IPMP task.
- 15 18. The publishing-playback system of claim 1 wherein:
 said parametric definition of IPMP tasks further comprising
 an access data requirement for providing data required by
 said user-application means in accessing an access unit.
- 20 19. The publishing-playback system of claim 1 wherein:
 said parametric definition of IPMP tasks further comprising
 an output data destination for defining a destination of an
 output generated by an IPMP task in said user-application
 means.
- 25 20. The publishing-playback system of claim 1 wherein:
 said parametric definition of IPMP tasks further comprising
 a missing resource process for defining a process to obtain a
 missing resource to perform an IPMP task.
- 30 21. The publishing-playback system of claim 1 wherein:
 said user-application means further comprising a task
 logging means for generating and logging task execution
 processes in performing an IPMP task.
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- 5 22. The publishing-playback system of claim 1 wherein:
 said parametric definition of IPMP tasks further comprising
 a list of input configuration parameters for configuring a set
 of input data to an IPMP task.
- 10 23. The publishing-playback system of claim 1 wherein:
 said parametric definition of IPMP tasks further comprising
 a list of output configuration parameters for configuring a
 set of output data generated from an IPMP task.
- 15 24. The publishing-playback system of claim 1 wherein:
 said parametric definition of IPMP tasks further comprising
 a task sequence for defining a sequential order to carry out a
 list of IPMP tasks.
- 20 25. The publishing-playback system of claim 1 wherein:
 said parametric definition of IPMP tasks further comprising
 an IPMP task appendix for appending and adding new
 IPMP tasks while keeping an existing IPMP task unchanged.
- 25 26. The publishing-playback system of claim 1 wherein:
 said parametric definition of IPMP tasks further comprising
 a error detection data for defining a method for detecting
 and rectifying an error occurred in transmitting said
 protected media data to said user-application means.
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27. A protected media data authored by an authoring-publishing means for transmitting to a user-media-player for playback, said protected media data comprising:

5 a parametric definition of intellectual property management and protection (IPMP) tasks for said user-media player to receive said protected media data and to response in real time to said parametric definition in applying one of several IPMP systems for processing and playback of said protected
10 media.

28. The protected media data of claim 27 wherein:

15 said parametric definition of IPMP tasks further comprising a tool list for including a list of tools executable by said user-media-player.

29. The protected media data of claim 28 wherein:

20 said IPMP tasks further includes a tool list provided for said user-media-player to perform a description matching for selecting a tool from said tool list to deploy on said user-media-player in response to an IPMP task included in said parametric definition.

25 30. The protected media of claim 27 wherein:

30 said parametric definition are arranged according to a grammar of a structured language.

35 31. The protected media data of claim 27 wherein:

 said parametric definition of IPMP tasks further comprising a tool-code for enabling said user-media-player to acquire a tool from an external resource to process said protected media data.

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- 5 32. The protected media data of claim 27 wherein:
 said parametric definition of IPMP tasks further comprising
 an indication of representing a complete or a partial part of
 an IPMP system.
- 10 33. The protected media data of claim 27 wherein:
 said parametric definition of IPMP tasks further comprising
 at least a portion provided in a text compression form.
- 15 34. The protected media data of claim 27 wherein:
 said parametric definition of IPMP tasks further comprising
 at least a portion provided in a machine language.
- 20 35. The protected media data of claim 27 wherein:
 said parametric definition of IPMP tasks further comprising
 at least a portion provided as an executable code by said
 user-media-player.
- 25 36. The protected media data of claim 27 wherein:
 said parametric definition of IPMP tasks further comprising
 at least a pre-condition required for said user-media-player
 to authorize said user-media-player to process said
 protected media data.
- 30 37. The protected media data of claim 27 wherein:
 said parametric definition of IPMP tasks further comprising
 at least a behavior-limit for said user-media-player to use
 said protected media data under an absence of permission
 condition of said user-media-player.
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38. The protected media data of claim 27 wherein:

said parametric definition of IPMP tasks further comprising at least a consumption-limit for defining a limited consumption of said protected media data by said user-media-player under an absence of permission condition of said user-media-player.

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10 39. A parametric representation method comprising:

- a) representing an intellectual property protection and management (IPMP) system as a combination of IPMP components each includes at least a task for protecting a protected media;
- b) authoring said combination of components together with a structure of at least one IPMP system into said protected media; and
- c) interpreting and reconstructing said protected media with said combination of IPMP components and said structure of IPMP system for play-back said protected media.

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